SAFETY DATA SHEET
ASTM D5580 Valve Timing Calibration Blend, Part Number G3440-85004

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier
Product name: ASTM D5580 Valve Timing Calibration Blend, Part Number G3440-85004
Part no.: G3440-85004

1.2 Relevant identified uses of the substance or mixture and uses advised against
Material uses: Reagents and Standards for Analytical Chemistry Laboratory Use
1 ml

1.3 Details of the supplier of the safety data sheet
Agilent Technologies LDA UK Ltd.
5500 Lakeside Cheadle Royal Business Park,
Cheadle, Cheshire, SK8 3GR
United Kingdom
Tel: +44 (0) 345 712 5292
e-mail address of person responsible for this SDS
pdl-msds_author@agilent.com

1.4 Emergency telephone number
Emergency telephone number (with hours of operation): CHEMTREC®: +(44)-870-8200418

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Product definition: Mixture
Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]
H225 FLAMMABLE LIQUIDS Category 2
H315 SKIN CORROSION/IRRITATION Category 2
H319 SERIOUS EYE DAMAGE/EYE IRRITATION Category 2
H340 GERM CELL MUTAGENICITY Category 1B
H350 CARCINOGENICITY Category 1A
H361fd REPRODUCTIVE TOXICITY Category 2
H336 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE Category 3
(Narcotic effects)
H372 SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE Category 1
H304 ASPIRATION HAZARD Category 1
H400 SHORT-TERM (ACUTE) AQUATIC HAZARD Category 1
H410 LONG-TERM (CHRONIC) AQUATIC HAZARD Category 1

See Section 16 for the full text of the H statements declared above.
See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements
Hazard pictograms:

Date of issue/Date of revision: 02/11/2021
Date of previous issue: No previous validation
Version: 1
SECTION 2: Hazards identification

Signal word: Danger

Hazard statements:
- H225 - Highly flammable liquid and vapour.
- H304 - May be fatal if swallowed and enters airways.
- H315 - Causes skin irritation.
- H319 - Causes serious eye irritation.
- H336 - May cause drowsiness or dizziness.
- H340 - May cause genetic defects.
- H350 - May cause cancer.
- H361fd - Suspected of damaging fertility. Suspected of damaging the unborn child.
- H372 - Causes damage to organs through prolonged or repeated exposure.
- H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention:
- P201 - Obtain special instructions before use.
- P280 - Wear protective gloves, protective clothing and eye or face protection.
- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Response:
- P391 - Collect spillage.

Storage:
- P403 + P235 - Store in a well-ventilated place. Keep cool.

Disposal:
- P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients:
- 2,2,4-trimethylpentane
- hexan-2-one
- benzene
- toluene

Supplemental label elements:
- Not applicable.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles
- Restricted to professional users.

Special packaging requirements:
- Tactile warning of danger: Not applicable.

2.3 Other hazards
- Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII:
  - This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification:
- Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapour may cause flash fire or explosion.

SECTION 3: Composition/information on ingredients

3.2 Mixtures:
- Mixture
**SECTION 3: Composition/information on ingredients**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Identifiers</th>
<th>%</th>
<th>Regulation (EC) No. 1272/2008 [CLP]</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,2,4-trimethylpentane</td>
<td>EC: 208-759-1 CAS: 540-84-1 Index: 601-009-00-8</td>
<td>≥50 - ≤75</td>
<td>Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)</td>
<td>[1]</td>
</tr>
</tbody>
</table>

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

**Type**

[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit
[5] Substance of equivalent concern
[6] Additional disclosure due to company policy
SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion: Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects:

Eye contact: Causes serious eye irritation.

Inhalation: Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

Skin contact: Causes skin irritation.

Ingestion: Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms:

Eye contact: Adverse symptoms may include the following:
- pain or irritation
- watering
- redness

Inhalation: Adverse symptoms may include the following:
- nausea or vomiting
- headache
- drowsiness/fatigue
- dizziness/vertigo
- unconsciousness
- reduced foetal weight
- increase in foetal deaths
- skeletal malformations

Skin contact: Adverse symptoms may include the following:
- irritation
- redness
- reduced foetal weight
- increase in foetal deaths
- skeletal malformations
SECTION 4: First aid measures

**Ingestion**

: Adverse symptoms may include the following:

- nausea or vomiting
- reduced foetal weight
- increase in foetal deaths
- skeletal malformations

**4.3 Indication of any immediate medical attention and special treatment needed**

**Notes to physician**

: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments**

: No specific treatment.

SECTION 5: Firefighting measures

**5.1 Extinguishing media**

**Suitable extinguishing media**

: Use dry chemical, CO₂, water spray (fog) or foam.

**Unsuitable extinguishing media**

: Do not use water jet.

**5.2 Special hazards arising from the substance or mixture**

**Hazards from the substance or mixture**

: Highly flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. This liquid may accumulate static electricity when filling properly-grounded containers. Static accumulation may be significantly increased by the presence of small quantities of water or other contaminants. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

**Hazardous combustion products**

: Decomposition products may include the following materials:

- carbon dioxide
- carbon monoxide

**5.3 Advice for firefighters**

**Special precautions for fire-fighters**

: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**Special protective equipment for fire-fighters**

: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures**

**For non-emergency personnel**

: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spill material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders**

: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
SECTION 6: Accidental release measures

6.2 Environmental precautions: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

6.4 Reference to other sections: See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures: Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not swallow. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Restrict flow velocity according to API 2003 (2008), NFPA 707 (2007), and Laurence Britton, “Avoiding Static Ignition Hazards in Chemical Operations”. To reduce potential for static discharge, ensure that all equipment is properly grounded and bonded and meets appropriate electrical classification requirements.

Advice on general occupational hygiene: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Storage: Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Seveso Directive - Reporting thresholds

Danger criteria
SECTION 7: Handling and storage

<table>
<thead>
<tr>
<th>Category</th>
<th>Notification and MAPP threshold</th>
<th>Safety report threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>P5c</td>
<td>5000 tonne</td>
<td>50000 tonne</td>
</tr>
<tr>
<td>E1</td>
<td>100 tonne</td>
<td>200 tonne</td>
</tr>
</tbody>
</table>

7.3 Specific end use(s)

**Recommendations**: Industrial applications, Professional applications.

**Industrial sector specific solutions**: Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

**Occupational exposure limits**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Exposure limit values</th>
</tr>
</thead>
</table>
| Hexan-2-one             | EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.  
                         | TWA: 21 mg/m³ 8 hours.  
                         | TWA: 5 ppm 8 hours.     |
| ethylbenzene            | EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.  
                         | STEL: 552 mg/m³ 15 minutes.  
                         | STEL: 125 ppm 15 minutes.  
                         | TWA: 100 ppm 8 hours.     
                         | TWA: 441 mg/m³ 8 hours.   |
| o-xylene                | EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.  
                         | STEL: 441 mg/m³ 15 minutes.  
                         | TWA: 50 ppm 8 hours.      
                         | TWA: 220 mg/m³ 8 hours.   
                         | STEL: 100 ppm 15 minutes.  |
| benzene                 | EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.  
                         | TWA: 1 ppm 8 hours.       
                         | TWA: 3.25 mg/m³ 8 hours.  |
| Toluene                 | EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.  
                         | STEL: 384 mg/m³ 15 minutes.  
                         | TWA: 191 mg/m³ 8 hours.   
                         | TWA: 50 ppm 8 hours.      
                         | STEL: 100 ppm 15 minutes.  |

**Recommended monitoring procedures**: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**DNELs/DMELs**
### SECTION 8: Exposure controls/personal protection

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Type</th>
<th>Exposure</th>
<th>Value</th>
<th>Population</th>
<th>Effects</th>
</tr>
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<tr>
<td>2,2,4-trimethylpentane</td>
<td>DNEL</td>
<td>Long term</td>
<td>608 mg/m³</td>
<td>General population</td>
<td>Systemic</td>
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<tr>
<td></td>
<td>DNEL</td>
<td>Long term Oral</td>
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<tr>
<td></td>
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<tr>
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<tr>
<td>ethylbenzene</td>
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<tr>
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<tr>
<td></td>
<td>DMEL</td>
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<td>442 mg/m³</td>
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<td>o-xylene</td>
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<td>65.3 mg/m³</td>
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<td>65.3 mg/m³</td>
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<tr>
<td></td>
<td>DNEL</td>
<td>Short term Inhalation</td>
<td>260 mg/m³</td>
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<td>Local</td>
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<tr>
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<tr>
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## SECTION 8: Exposure controls/personal protection

<table>
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<tr>
<th></th>
<th>DNEL</th>
<th>Long term Dermal</th>
<th>384 mg/kg bw/day</th>
<th>Workers</th>
<th>Systemic</th>
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<td>Workers</td>
<td>Systemic</td>
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</tbody>
</table>

### PNECs

No PNECs available

### 8.2 Exposure controls

#### Appropriate engineering controls

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

#### Individual protection measures

##### Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

##### Eye/face protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

##### Skin protection

#### Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

#### Body protection

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

#### Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

#### Respiratory protection

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

#### Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

**Appearance**
- **Physical state**: Liquid. [Clear.]
- **Colour**: Colourless.
- **Odour**: Not available.
- **Odour threshold**: Not available.
- **Melting point/freezing point**: -116°C
- **Initial boiling point and boiling range**: 99°C (210.2°F)
- **Flash point**: Closed cup: -12°C (10.4°F)
- **Auto-ignition temperature**: Not available.

**Solubility(ies)**: Easily soluble in the following materials: acetone. Insoluble in the following materials: cold water and hot water.

**Partition coefficient: n-octanol/water**: Not applicable.

**Vapour pressure**: <5.5 kPa (<41 mm Hg)

**Evaporation rate**: >1 (butyl acetate = 1)

**Relative density**: 0.69

**Density**: 0.69 g/cm³

**Vapour density**: Not available.

**Explosive properties**: Slightly explosive in the presence of the following materials or conditions: oxidising materials.

**Oxidising properties**: Not available.

**Particle characteristics**
- **Median particle size**: Not applicable.

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity
- No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability
- The product is stable.

10.3 Possibility of hazardous reactions
- Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid
- Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
SECTION 10: Stability and reactivity

10.5 Incompatible materials
Reactive or incompatible with the following materials:
- Oxidising materials
- Alkalis
- Metal salt

10.6 Hazardous decomposition products
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

**Acute toxicity**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,2,4-trimethylpentane</td>
<td>LC50 Inhalation Vapour</td>
<td>Rat - Male, Female</td>
<td>&gt;33.52 mg/l</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat - Male, Female</td>
<td>&gt;5000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Hexan-2-one</td>
<td>LC50 Inhalation Vapour</td>
<td>Rat</td>
<td>8000 ppm</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>4800 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>2590 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>ethylbenzene</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>&gt;5000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>3500 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>o-xylene</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>27.559 mg/l</td>
<td>4 hours</td>
</tr>
<tr>
<td>benzene</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>930 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Toluene</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>12000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rabbit</td>
<td>636 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

**Acute toxicity estimates**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Oral (mg/kg)</th>
<th>Dermal (mg/kg)</th>
<th>Inhalation (gases) (ppm)</th>
<th>Inhalation (vapours) (mg/l)</th>
<th>Inhalation (dusts and mists) (mg/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTM D5580 Valve Timing Calibration Blend, Part Number G3440-85004</td>
<td>N/A</td>
<td>12222.2</td>
<td>N/A</td>
<td>61.1</td>
<td>N/A</td>
</tr>
<tr>
<td>Hexan-2-one</td>
<td>2590</td>
<td>4800</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>ethylbenzene</td>
<td>3500</td>
<td>N/A</td>
<td>N/A</td>
<td>11</td>
<td>N/A</td>
</tr>
<tr>
<td>o-xylene</td>
<td>3000</td>
<td>1100</td>
<td>N/A</td>
<td>11</td>
<td>N/A</td>
</tr>
<tr>
<td>Toluene</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>49</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Irritation/Corrosion**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexan-2-one</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 mg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 mg</td>
<td>-</td>
</tr>
<tr>
<td>ethylbenzene</td>
<td>Eyes - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>500 mg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 15 mg</td>
<td>-</td>
</tr>
<tr>
<td>benzene</td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>88 mg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rat</td>
<td>-</td>
<td>8 hours 60 µL</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 15 mg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 20 mg</td>
<td>-</td>
</tr>
<tr>
<td>Toluene</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>0.5 minutes 100 mg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>870 ug</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>435 mg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 20 mg</td>
<td>-</td>
</tr>
</tbody>
</table>
SECTION 11: Toxicological information

### Carcinogenicity

**Conclusion/Summary**: Not available.

### Mutagenicity

**Conclusion/Summary**: Not available.

### Reproductive toxicity

**Conclusion/Summary**: Not available.

### Teratogenicity

**Conclusion/Summary**: Not available.

### Potential acute health effects

**Inhalation**: Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

**Ingestion**: Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

**Skin contact**: Causes skin irritation.

**Eye contact**: Causes serious eye irritation.

### Specific target organ toxicity (single exposure)

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,2,4-trimethylpentane</td>
<td>Category 3</td>
<td>-</td>
<td>Narcotic effects</td>
</tr>
<tr>
<td>Hexan-2-one</td>
<td>Category 3</td>
<td>-</td>
<td>Narcotic effects</td>
</tr>
<tr>
<td>o-xylene</td>
<td>Category 3</td>
<td>-</td>
<td>Respiratory tract irritation</td>
</tr>
<tr>
<td>Toluene</td>
<td>Category 3</td>
<td>-</td>
<td>Narcotic effects</td>
</tr>
</tbody>
</table>

### Specific target organ toxicity (repeated exposure)

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexan-2-one</td>
<td>Category 1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>ethylbenzene</td>
<td>Category 2</td>
<td>-</td>
<td>hearing organs</td>
</tr>
<tr>
<td>benzene</td>
<td>Category 1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Toluene</td>
<td>Category 2</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

### Aspiration hazard

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTM D5580 Valve Timing Calibration Blend, Part Number G3440-85004</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
<tr>
<td>2,2,4-trimethylpentane</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
<tr>
<td>ethylbenzene</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
<tr>
<td>o-xylene</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
<tr>
<td>benzene</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
<tr>
<td>Toluene</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
</tbody>
</table>

### Information on likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation.

### Skin irritation

**Skin** - Moderate irritant

**Rabbit** - 500 mg

Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

**Sensitiser**

**Conclusion/Summary**: Not available.

**Mutagenicity**

**Conclusion/Summary**: Not available.

**Carcinogenicity**

**Conclusion/Summary**: Not available.

**Reproductive toxicity**

**Conclusion/Summary**: Not available.

**Teratogenicity**

**Conclusion/Summary**: Not available.
## SECTION 11: Toxicological information

### Inhalation
- Adverse symptoms may include the following:
  - nausea or vomiting
  - headache
  - dizziness/vertigo
  - unconsciousness
  - reduced foetal weight
  - increase in foetal deaths
  - skeletal malformations

### Ingestion
- Adverse symptoms may include the following:
  - nausea or vomiting
  - reduced foetal weight
  - increase in foetal deaths
  - skeletal malformations

### Skin contact
- Adverse symptoms may include the following:
  - irritation
  - redness
  - reduced foetal weight
  - increase in foetal deaths
  - skeletal malformations

### Eye contact
- Adverse symptoms may include the following:
  - pain or irritation
  - watering
  - redness

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure
- **Potential immediate effects**: Not available.
- **Potential delayed effects**: Not available.

#### Long term exposure
- **Potential immediate effects**: Not available.
- **Potential delayed effects**: Not available.

### Potential chronic health effects
- **General**: Causes damage to organs through prolonged or repeated exposure.
- **Carcinogenicity**: May cause cancer. Risk of cancer depends on duration and level of exposure.
- **Mutagenicity**: May cause genetic defects.
- **Reproductive toxicity**: Suspected of damaging fertility. Suspected of damaging the unborn child.

## SECTION 12: Ecological information

### 12.1 Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexan-2-one</td>
<td>Acute LC50 428000 µg/l Fresh water</td>
<td>Fish - Pimephales promelas</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 4900 µg/l Marine water</td>
<td>Algae - Skeletonema costatum</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 7700 µg/l Marine water</td>
<td>Algae - Skeletonema costatum</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 6.53 mg/l Marine water</td>
<td>Crustaceans - Artemia sp. - Nauplii</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 2.93 mg/l Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>48 hours</td>
</tr>
<tr>
<td>o-xylene</td>
<td>Acute LC50 4200 µg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 10.7 mg/l Marine water</td>
<td>Crustaceans - Artemia sp. - Nauplii</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 1.39 mg/l Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 7600 µg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>96 hours</td>
</tr>
</tbody>
</table>
### SECTION 12: Ecological information

#### Mobility

- **Not available.**

#### LogP<sub>ow</sub>, BCF, Potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP&lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,2,4-trimethylpentane</td>
<td>4.08</td>
<td>231</td>
<td>low</td>
</tr>
<tr>
<td>Hexan-2-one</td>
<td>1.38</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>ethylbenzene</td>
<td>3.6</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>o-xylene</td>
<td>3.12</td>
<td>8.1</td>
<td>low</td>
</tr>
<tr>
<td>benzene</td>
<td>2.13</td>
<td>11</td>
<td>low</td>
</tr>
<tr>
<td>Toluene</td>
<td>2.73</td>
<td>90</td>
<td>low</td>
</tr>
</tbody>
</table>

#### 12.2 Persistence and degradability

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Result</th>
<th>Dose</th>
<th>Inoculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethylbenzene</td>
<td>ISO OECD 301F Ready Biodegradability</td>
<td>70 to 80 % - Readily - 28 days</td>
<td>-</td>
<td>Activated sludge</td>
</tr>
<tr>
<td>o-xylene</td>
<td>Manometric Respirometry Test</td>
<td>98 % - Readily - 28 days</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>o-xylene</td>
<td>OECD 301F</td>
<td>Ready Biodegradability</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>benzene</td>
<td></td>
<td></td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Toluene</td>
<td></td>
<td></td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

#### 12.3 Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Aquatic half-life</th>
<th>Photolysis</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,2,4-trimethylpentane</td>
<td></td>
<td></td>
<td>Inherent</td>
</tr>
<tr>
<td>ethylbenzene</td>
<td></td>
<td></td>
<td>Readily</td>
</tr>
<tr>
<td>o-xylene</td>
<td></td>
<td></td>
<td>Readily</td>
</tr>
<tr>
<td>benzene</td>
<td></td>
<td></td>
<td>Readily</td>
</tr>
<tr>
<td>Toluene</td>
<td></td>
<td></td>
<td>Readily</td>
</tr>
</tbody>
</table>

#### 12.4 Mobility in soil

Soil/water partition coefficient (K<sub>OC</sub>): Not available.

Mobility: Not available.

#### 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
12.6 Other adverse effects: No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

**Product**

Methods of disposal: The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Packaging**

Methods of disposal: The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions: This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spill material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

<table>
<thead>
<tr>
<th>14.1 UN number</th>
<th>ADR/RID</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN1993</td>
<td>UN1993</td>
<td>UN1993</td>
<td>UN1993</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14.2 UN proper shipping name</th>
<th>ADR/RID</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLAMMABLE LIQUID, N.O.S. (2,2,4-trimethylpentane, Hexan-2-one)</td>
<td>FLAMMABLE LIQUID, N.O.S. (2,2,4-trimethylpentane, Hexan-2-one)</td>
<td>Flammable liquid, n.o.s. (2,2,4-trimethylpentane, Hexan-2-one)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14.3 Transport hazard class(es)</th>
<th>ADR/RID</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14.4 Packing group</th>
<th>ADR/RID</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>II</td>
<td>II</td>
<td>II</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14.5 Environmental hazards</th>
<th>ADR/RID</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes.</td>
<td>Yes.</td>
<td>Yes.</td>
<td>Yes. The environmentally hazardous substance mark is not required.</td>
</tr>
</tbody>
</table>

**Additional information**

Remarks: De minimis quantities

**ADR/RID**

- **Hazard identification number**: 33
- **Limited quantity**: 1 L
- **Special provisions**: 601, 274, 640C
- **Tunnel code**: (D/E)

**IMDG**

- **Emergency schedules**: F-E, _S-E_
- **Special provisions**: 274
ASTM D5580 Valve Timing Calibration Blend, Part Number G3440-85004

SECTION 14: Transport information

IATA: The environmentally hazardous substance mark may appear if required by other transportation regulations.

**Quantity limitation**
- Passenger and Cargo Aircraft: 5 L. Packaging instructions: 353.
- Cargo Aircraft Only: 60 L. Packaging instructions: 364.

**Special provisions** A3

### 14.6 Special precautions for user

**Transport within user's premises**: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**The environmentally hazardous substance mark** may appear if required by other transportation regulations.

**Quantity limitation**
- Passenger and Cargo Aircraft: 5 L. Packaging instructions: 353.
- Cargo Aircraft Only: 60 L. Packaging instructions: 364.

**Special provisions** A3

### 14.7 Transport in bulk according to IMO instruments

Not available.

SECTION 15: Regulatory information

#### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

**EU Regulation (EC) No. 1907/2006 (REACH)**

**Annex XIV - List of substances subject to authorisation**

**Annex XIV**
None of the components are listed.

**Substances of very high concern**
None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>EC number</th>
<th>CAS number</th>
<th>Restriction</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTM D5580 Valve Timing Calibration Blend, Part Number G3440-85004</td>
<td>208-759-1</td>
<td>540-84-1</td>
<td>3, 28, 29</td>
</tr>
<tr>
<td>2,2,4-trimethylpentane</td>
<td>202-849-4</td>
<td>100-41-4</td>
<td>3</td>
</tr>
<tr>
<td>ethylbenzene</td>
<td>202-422-2</td>
<td>95-47-6</td>
<td>3</td>
</tr>
<tr>
<td>o-xylene</td>
<td>200-753-7</td>
<td>71-43-2</td>
<td>3, 5, 28, 29, 72</td>
</tr>
<tr>
<td>benzene</td>
<td>203-625-9</td>
<td>108-88-3</td>
<td>3, 48</td>
</tr>
</tbody>
</table>

**Label**: Restricted to professional users.

**Other EU regulations**

**Ozone depleting substances (1005/2009/EU)**
Not listed.

**Prior Informed Consent (PIC) (649/2012/EU)**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Annex</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzene</td>
<td>Annex I - Part 1</td>
<td>Listed</td>
</tr>
</tbody>
</table>

**Persistent Organic Pollutants**
Not listed.

**Seveso Directive**
This product is controlled under the Seveso Directive.

**Danger criteria**

<table>
<thead>
<tr>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>P5c</td>
</tr>
<tr>
<td>E1</td>
</tr>
</tbody>
</table>

**National regulations**

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SECTION 15: Regulatory information

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>List name</th>
<th>Name on list</th>
<th>Classification</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>benzene</td>
<td>UK Occupational Exposure Limits EH40-WEL</td>
<td>benzene; benzol</td>
<td>Carc.</td>
<td>-</td>
</tr>
</tbody>
</table>

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals
Not listed.

Montreal Protocol
Not listed.

Stockholm Convention on Persistent Organic Pollutants
Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)
Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals
Not listed.

Inventory list

Australia: All components are listed or exempted.
Canada: All components are listed or exempted.
China: All components are listed or exempted.
Europe: All components are listed or exempted.
Japan: Japan inventory (CSCL): All components are listed or exempted.
Japan inventory (ISHL): All components are listed or exempted.
New Zealand: All components are listed or exempted.
Philippines: All components are listed or exempted.
Republic of Korea: All components are listed or exempted.
Taiwan: All components are listed or exempted.
Thailand: Not determined.
Turkey: Not determined.
United States: All components are active or exempted.
Viet Nam: All components are listed or exempted.

15.2 Chemical safety assessment
This product contains substances for which Chemical Safety Assessments might still be required.

SECTION 16: Other information

* Indicates information that has changed from previously issued version.

Abbreviations and acronyms

ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
N/A = Not available
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]
## ASTM D5580 Valve Timing Calibration Blend, Part Number G3440-85004


### SECTION 16: Other information

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flam. Liq. 2, H225</td>
<td>On basis of test data</td>
</tr>
<tr>
<td>Skin Irrit. 2, H315</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Eye Irrit. 2, H319</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Muta. 1B, H340</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Carc. 1A, H350</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Repr. 2, H361fd</td>
<td>Calculation method</td>
</tr>
<tr>
<td>STOT SE 3, H336</td>
<td>Calculation method</td>
</tr>
<tr>
<td>STOT RE 1, H372</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Asp. Tox. 1, H304</td>
<td>Expert judgment</td>
</tr>
<tr>
<td>Aquatic Acute 1, H400</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Aquatic Chronic 1, H410</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

### Full text of abbreviated H statements

- **H225** Highly flammable liquid and vapour.
- **H226** Flammable liquid and vapour.
- **H304** May be fatal if swallowed and enters airways.
- **H312** Harmful in contact with skin.
- **H315** Causes skin irritation.
- **H319** Causes serious eye irritation.
- **H322** Harmful if inhaled.
- **H335** May cause respiratory irritation.
- **H336** May cause drowsiness or dizziness.
- **H340** May cause genetic defects.
- **H350** May cause cancer.
- **H361d** Suspected of damaging the unborn child.
- **H361f** Suspected of damaging fertility.
- **H361fd** Suspected of damaging fertility. Suspected of damaging the unborn child.
- **H372** Causes damage to organs through prolonged or repeated exposure.
- **H373** May cause damage to organs through prolonged or repeated exposure.
- **H400** Very toxic to aquatic life.
- **H410** Very toxic to aquatic life with long lasting effects.
- **H412** Harmful to aquatic life with long lasting effects.

### Full text of classifications [CLP/GHS]

- **Acute Tox. 4** ACUTE TOXICITY - Category 4
- **Aquatic Acute 1** SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
- **Aquatic Chronic 1** LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
- **Aquatic Chronic 3** LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
- **Asp. Tox. 1** ASPIRATION HAZARD - Category 1
- **Carc. 1A** CARCINOGENICITY - Category 1A
- **Eye Irrit. 2** SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
- **Flam. Liq. 2** FLAMMABLE LIQUIDS - Category 2
- **Flam. Liq. 3** FLAMMABLE LIQUIDS - Category 3
- **Muta. 1B** GERM CELL MUTAGENICITY - Category 1B
- **Repr. 2** REPRODUCTIVE TOXICITY - Category 2
- **Skin Irrit. 2** SKIN CORROSION/IRRITATION - Category 2
- **STOT RE 1** SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1
- **STOT RE 2** SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
- **STOT SE 3** SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

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**Date of previous issue**: No previous validation

**Version**: 1

**Notice to reader**
SECTION 16: Other information

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